

# Vanguard Personal Advisor Services Brochure

September 20, 2013

#### Vanguard Advisers, Inc.

100 Vanguard Blvd., Malvern, PA 19355 800-416-8420 vanguard.com

This brochure provides information about the qualifications and business practices of Vanguard Personal Advisor Services™, an advisory service offered through Vanguard Advisers, Inc. ("VAI"). This brochure also describes how VAI is compensated for the service provided to you. You should carefully consider this information in your evaluation of the service. If you have any questions about the contents of this brochure, please contact us at the number above. The information in this brochure hasn't been approved or verified by the United States Securities and Exchange Commission ("SEC") or by any state securities authority.

Additional information about VAI also is available on the SEC's website at adviserinfo.sec.gov.

VAI is a registered investment advisor with the SEC. Registration doesn't imply a certain level of skill or training.

Material changes: Vanguard Personal Advisor Services is a new advisory service offered under VAI. VAI is issuing this initial brochure in compliance with SEC rules 203-1, 204-1, 204-2, and 204-3 under the Investment Advisers Act of 1940; therefore, there are no material changes to disclose.

# Contents

Advisory business 1
Fees and compensation4
Performance-based fees and side-by-side management 6
Types of clients
Methods of analysis, investment strategies, and risk of loss6
Disciplinary information
Other financial industry activities and affiliations
Code of ethics, participation or interest in client transactions, and personal trading17
Brokerage practices
Review of accounts
Client referrals and other compensation
Custody
Investment discretion
Voting client securities22
Financial information
Requirements for state-registered advisors
Investment risks

## Advisory business

Vanguard Advisers, Inc. ("VAI"), is a Pennsylvania corporation that provides investment advisory services to a wide variety of clients. VAI was incorporated in and has been in business since 1995. VAI is 100% owned by Goliath, Inc., a Delaware corporation. As such, VAI is an indirect, wholly owned subsidiary of The Vanguard Group, Inc. ("Vanguard"), the sponsor and manager of the family of mutual funds and ETFs comprising The Vanguard Group of Investment Companies ("Vanguard Funds"), which VAI typically recommends as investments.

#### Vanguard Personal Advisor Services

Vanguard Personal Advisor Services (the "Service") is an advisory service launched by VAI in the first quarter of 2013. It offers you an investment strategy for accounts that you enroll in the Service, based on an affordable and personalized financial plan created by VAI (the "Financial Plan"). After providing the Service with information relating to your financial situation and investment objectives, a draft financial plan will be formulated for you that will recommend an asset allocation and specific Vanguard Funds that will be maintained in your account(s) to meet that allocation. The recommendations made by VAI in connection with the Service will normally be limited to allocations in Vanguard Funds and will generally not include recommendations to invest in individual securities or bonds, CDs, options, derivatives, annuities, third-party mutual funds, closed-end funds, unit investment trusts, partnerships, or other non-Vanguard securities, although you may be able to impose reasonable restrictions upon our investment strategy (please see the section entitled "Reasonable restrictions" for a discussion of reasonable restrictions).

The draft plan will be reviewed and finalized with you during a phone conference with an experienced advisor. Once you have adopted the terms of the Financial Plan, the Service will perform the necessary transactions to hold the mix of Vanguard Funds designed to meet the asset allocation recommended for your account(s) in the Financial Plan. Changes to the investment strategy set forth in the Financial Plan will be made only with your consent. The Service will provide ongoing monitoring, review, and rebalancing of the account(s) in the Financial Plan pursuant to the standing instructions you approve in the Financial Plan. Collectively, the Vanguard accounts enrolled in the Service where investments are made by the Service to maintain your target allocation will be referred to herein as the "Portfolio."

By enrolling in the Service, you're granting VAI discretionary authority to purchase and sell securities on your behalf. Accordingly, VAI may change the investments used to effect the investment strategy set forth in the Financial Plan at any time and without prior notice to you, including changing the investments used for purposes of rebalancing the Portfolio or substituting a particular investment for another investment you previously approved. If, however, VAI recommends such a change with respect to securities held in an individual retirement account, VAI will notify you at least 30 days before the change is implemented.

Any notice of a proposed change in investments will include the effective date of the proposed change, instructions you may follow to avoid the proposed change, and a reminder that your failure to respond by a specified date will be deemed to be your consent to the proposed change in investments.

The Service will also provide goals-based forecasting and recommendations on how to better meet your investing goals. You'll work with an advisor to focus on your specific goals, which can include planning for college, saving for a home, establishing a rainy-day fund, or saving for retirement. You design the goals to meet your own particular financial situation. Your goals may be supported by your Portfolio as well as accounts held outside of the Portfolio.

The Service also offers an online experience that includes web content based on your goals and provides personalized reporting. The online experience is accessed by logging on to your account at vanguard.com. At least annually, you'll have a phone conference with an advisor to validate your financial planning needs and the strategy chosen for the Portfolio, and determine whether there have been any changes in your financial situation, risk tolerance, tax situation, investment time horizon, investment objectives, or desired reasonable restrictions that may require a new Financial Plan for your review and approval.

In connection with the Service, you'll retain the right to (i) withdraw securities or cash from the Portfolio; (ii) vote on shareholder proposals of beneficially owned securities or delegate the authority to vote on such proposals to another person; (iii) be provided, in a timely manner, with a confirmation or other notification of each securities transaction in the Portfolio and all other documents required by law to be provided to security holders; and (iv) proceed directly as a security holder against the issuer of any security in the Portfolio and not be obligated to join any person involved in the operation of the Service, or any other client of the Service, as a condition precedent to initiating such proceeding.

#### Additional information for Vanguard individual retirement account holders

VAI intends the Service to be a level-fee eligible investment advice arrangement and to comply with the conditions of the statutory exemption for eligible investment advice arrangements under Sections 408(b)(14) and (g) of the Employee Retirement Income Security Act ("ERISA") and Sections 4975(d)(17) and (f)(8) of the Internal Revenue Code (the "Code"). In providing the Service for assets held in individual retirement accounts, as that term is defined in Section 408(a) of the Code ("IRA"), VAI will act as a fiduciary advisor as defined under Section 408(g) (11) of ERISA and Section 4975(f)(8)(J) of the Code and, therefore, VAI must act prudently and only with clients' interest in mind when providing clients recommendations regarding investment of IRA assets. The Service will be audited annually by an independent auditor for compliance with the requirements of the statutory level-fee exemption and related regulation. A copy of the most recent version of the auditor's findings will be provided to clients with IRAs enrolled in the Service or posted and made available for review by those clients at vanguard.com within 30 days of receipt of the report from the auditor.

#### Reasonable restrictions

You'll have the ability to impose reasonable restrictions on the investments chosen for the Portfolio. Specifically, you may be able to request that certain non-Vanguard securities be held as part of the Portfolio, provided that those securities meet certain standards imposed by VAI. Certain investments that you may request be held as part of the Portfolio, such as individual stocks and bonds, stock-sector funds, and other non-Vanguard funds, may not offer the same degree of diversification, liquidity, or performance consistency that may be available with the Vanguard Funds we normally recommend.

If you request that such securities remain in the Portfolio, the Service will analyze whether such securities may fit into the overall stock or bond allocations recommended for the Portfolio. When analyzing non-Vanguard open-end mutual fund securities, the Service will rely upon asset classification information provided by Morningstar in order to categorize these investments. VAI isn't responsible for incomplete or incorrect information that may be provided by Morningstar with respect to the asset classification of third-party securities. The Service may retain such securities upon your request as long as the resulting Portfolio meets our standards of portfolio diversification.

If VAI maintains a sell recommendation for a particular security that you want to be held as part of the Portfolio, such security may be characterized by VAI as being subject to a client-directed hold if it meets standards imposed by VAI. If a security is characterized as being subject to a client-directed hold, VAI may permit that security to remain part of the Portfolio. VAI won't be responsible, however, for performing due diligence on any security that's subject to a client-directed hold. You may also have the ability to designate certain securities that shouldn't be purchased for the Portfolio or that shouldn't be sold if held in the Portfolio. If your desired restrictions are unreasonable or if we believe that the restrictions are inappropriate for you, we'll notify you that, unless the instructions are modified, we may remove particular securities from the Portfolio, remove particular accounts from the Portfolio, or terminate the Service.

## Funding or adding assets to accounts

You may transfer assets to and from the Portfolio at any time, provided that you give VAI prior notice of the transfer and secure VAI's approval. VAI and its affiliates reserve the right to decline to accept the transfer of particular securities. If you'll be transferring cash to the Portfolio in an amount less than \$3,000, your advisor will provide you with instructions on how to accomplish the transfer. If you'll be transferring cash to the Portfolio in an amount greater than or equal to \$3,000, you hereby agree to establish, at the time of transfer, an account in Vanguard Prime Money Market Fund for the purpose of accepting your transfer of cash into the Portfolio. Assets transferred to the Portfolio will be invested according to the terms of the current Financial Plan unless and until you establish a new Financial Plan. If you haven't yet established a Financial Plan, assets will be held in cash, or in kind, as transferred, until you establish a Financial Plan for such assets.

#### Account restrictions

In your Service Agreement, you'll agree not to purchase or sell securities in your Portfolio while enrolled in the Service, and you'll be blocked from such activity until you terminate the Service. You'll also be prohibited from establishing or maintaining other services on any accounts in the Portfolio, including but not limited to checkwriting and automatic trading services (such as automatic investment/withdrawal/exchange) and setting required minimum distribution (RMD) payments. Other account transactions or services may be restricted or unavailable through the web experience, but can be processed or enabled with the assistance of your advisor. For example, cost basis provisioning and dividend and capital gain distribution elections may require the assistance of an advisor.

You may not receive third-party discretionary advice on assets held in the Portfolio under this Service. If you wish to receive third-party discretionary advice regarding certain securities in the Portfolio, VAI can assist you in transferring those securities to an account outside of the Portfolio, or you may choose to terminate the Service. You may separately arrange for the provision of advice by another provider that has no material affiliation with, and receives no compensation in connection with, the mutual funds, securities, or other property that are held in your accounts.

Vanguard Personal Advisor Services is a new service that had no discretionary assets under management as of December 31, 2012.

#### Fees and compensation

The fee paid to VAI under the Service will be 30 basis points (0.30%) annually. Fees will be calculated quarterly and based on your average daily balance in the Portfolio across the entire fee period. A fee period is the prior calendar quarter. The fee will be deducted on the first Monday (non-holiday) after the completion of a fee period. If the first Monday following the completion of a fee period is a holiday, then the fee will be deducted on the next business day. A total fee will be calculated across all securities in the Portfolio, with the exception of money market fund positions. VAI won't assess a fee on the balance of money market fund assets held within the Portfolio. VAI will select the designated fee account(s) of the Portfolio from which the fee will be deducted and then will systematically determine which fund(s) to deduct the fees from based upon a hierarchy of expected fund volatility from least to most volatile. The fund hierarchy prioritizes mutual funds with relatively low volatility and expected tax consequences over funds with higher volatility and potential imbedded gains. Unless the only account in the Portfolio is an IRA, VAI won't select the IRA as the account from which the fee should be deducted. In the case of multiple IRAs only in the Portfolio, the fee will be taken proportionally from all of the IRAs in the Portfolio. VAI reserves the right to change the annual service fee or charge additional fees for other services upon 30 days' written notice to you. Upon termination of the Service, VAI may require payment of any accrued fees from the time of the last guarterly payment until the termination date.

**Note:** The Service reserves the right to provide periodic fee waivers where it deems appropriate.

There may be periods of time when rebalancing isn't needed because the Portfolio is appropriately allocated. The Service will continue to monitor your Portfolio and goals to help keep you on track to meet your investment objectives and will therefore continue to charge all applicable fees during these times of inactivity.

The advice provided by VAI may include recommendations to sell, hold, or purchase Vanguard Funds. Where we transact to implement your Financial Plan or you act in accordance with such advice, it'll result in the payment of fees to the Vanguard Funds and to Vanguard, an affiliate of VAI. A purchase or sale of Vanguard Fund shares isn't subject to a load, sales charge, or commission. However, each Vanguard Fund incurs advisory, administrative, and custodial fees, as well as other fees and expenses that it pays out of its own assets. The advisory, administrative, custodial, and other costs make up the Vanguard Funds' expense ratios. Also, some Vanguard Funds impose purchase and redemption fees. Clients who invest in Vanguard Funds are subject to the applicable expense ratios and to any purchase and redemption fees. Please consult the prospectus for information about a specific Vanguard Fund's expense ratio and any fees assessed by that fund. You may also incur transaction or brokerage charges when transacting in Vanguard ETFs®. Please see the section of this brochure entitled "Brokerage practices" for more information about brokerage charges.

The purchase or sale of third-party mutual fund shares through Vanguard or its affiliates may be subject to a load or sales charge, although VAI generally recommends the purchase of no-load mutual funds, and Vanguard Funds in particular. A fund's expenses are detailed in the fund's prospectus. In the event that VAI recommends that you transact in non-Vanguard investments, you may incur additional fees, including transaction fees, brokerage charges, sales charges, expense ratios, commissions, markups, or other fees or expenses. In addition, Vanguard or its affiliates may receive other compensation, including asset-based sales charges, service fees, revenue-sharing payments, 12b-1 fees, or other fees, in connection with such investments. Please see the section of this brochure entitled "Brokerage practices" for more information about brokerage charges.

You may also incur account service fees and other account charges and processing fees in connection with establishing accounts with VAI's affiliates in connection with the Service. You should review the terms of your Mutual Fund Kit, IRA Kit, or Brokerage Account Kit for details regarding fees that may be assessed in connection with these accounts.

The advice provided by the advisor won't take into consideration whether Vanguard or any of its affiliates would receive fees from its recommendation to purchase, hold, or sell Vanguard Funds or non-Vanguard investments. Fees received by VAI and compensation paid to its employees, agents, and registered advisors for advice under the Service don't

vary on the basis of any investment options selected, and the advisors who deliver the Service aren't compensated for or on the basis of any recommendation or sales of specific securities. Fees for the Service are in addition to the underlying mutual fund expenses that all fund shareholders pay. You should review this information and carefully consider the impact of these fees and compensation when evaluating the Service before approving your Financial Plan.

Vanguard Marketing Corporation ("VMC"), a registered broker-dealer that's a wholly owned subsidiary of Vanguard and an affiliate of VAI, offers a limited number of commission-free transactions to clients that are eligible for certain service levels. If you're currently enrolled in one of these services, transactions in your Portfolio will reduce your number of commission-free transactions when executed.

## Performance-based fees and side-by-side management

Neither VAI nor the advisors who deliver the Service receive performance-based fees for advisory services provided to you.

## Types of clients

Vanguard Personal Advisor Services is made available to clients of Vanguard and prospects with a minimum of \$100,000 of investable cash or securities in the Portfolio. Clients eligible for the Service include those with individual accounts (including IRAs), joint accounts, and certain trust accounts. Other account types may be considered by the Service for purposes of suggesting asset allocations or providing recommendations and goals forecasting, but VAI won't invest or reallocate assets in those other accounts.

## Methods of analysis, investment strategies, and risk of loss

VAI's investment methodology incorporates our own investment philosophies and beliefs, such as the benefits of low costs, diversification, and indexing. Our methodology, which is approved and periodically reviewed by senior Vanguard management, is based on Vanguard's own fundamental research, as well as research obtained from a wide variety of external sources, both public and private. Our methodology is driven by long-term financial goals, not by market-timing or short-term investment performance. Rather than attempting to predict which investments will provide superior performance at any given time, VAI generally believes that maintaining a broadly diversified portfolio, including investments from a variety of market sectors and asset classes, that focuses on maximizing after-tax returns, can provide the best opportunity for success. If, as a result of its periodic review, VAI makes material changes to our methodology that impact your Financial Plan, those changes will be communicated to you. Upon notification, you'll have the opportunity to approve those changes.

## Investment strategy for the Portfolio

VAI's investment strategies are designed with a disciplined, long-term approach that focuses on managing risk through appropriate asset allocation and diversification. VAI's methodology uses a strategic approach by first focusing on the mix of asset classes (i.e., stocks, bonds, cash) needed to meet your financial goals over time, then selecting the specific investments for your Portfolio. VAI uses publicly traded investment vehicles, and primarily Vanguard Funds, to meet your recommended asset allocation.

The Service relies on certain assumptions provided by the client or based on Vanguard analysis about future financial factors, such as rates of return on certain types of investments, inflation rates, client rate of savings, percentage of income needed in retirement, portfolio withdrawals, tax rates, taxable capital gains and losses, college costs, and market returns, in order to develop an investment strategy for you. All assumptions are estimates based on historical data that, in VAI's opinion, serve as a useful and reasonable foundation on which to develop financial strategies.

### Developing an asset allocation for the Portfolio

First, the Service will gather information through the use of a questionnaire and possible consultation with an advisor to understand your financial objectives, such as your age, specific financial goals, investment time horizon, current investments, tax status, other assets and sources of income, investment preferences, planned spending from the Portfolio, and your willingness to assume risk with the cash and securities being invested in the Portfolio. The Service will use the information you provide us to develop an investment strategy for you, which may include separate asset allocation strategies tailored to each of your financial goals. When multiple account registrations are used to support a goal, the asset mix of any single account registration may vary, but collectively the account registrations will achieve the target asset allocation for the goal. In some cases, the Service may consider the assets you own outside the Portfolio as part of the assessment of your investment situation to identify an appropriate asset mix.

When setting and adjusting your asset allocation, the Service weighs "shortfall risk"—the possibility that a portfolio will fail to meet longer-term financial goals—against "market risk," or the chance that a portfolio's value will fluctuate based on the market's ups and downs. An investment strategy that's too conservative raises the risk that inflation will erode the purchasing power of a long-term portfolio. Appropriate asset allocations may range from 100% stock to 100% short-term reserves based on the risk tolerance and remaining investment time horizon for a particular financial goal. Investment strategies for different goals may reflect different trade-offs between shortfall and market risk.

Diversifying the Portfolio asset allocation across a variety of sub-asset classes The Service seeks to provide adequate diversification within each asset class. VAI recommends investing across different market segments to ensure sub-asset class diversification. The Service will define allowable sub-asset class ranges. The Service will adjust your Portfolio to position sub-asset classes within our allowable ranges. As shown in your Financial Plan, the Service may propose the addition, removal, or adjustment of sub-asset class exposures based on continuing portfolio construction research performed by the Vanguard Investment Strategy Group, or based upon changes to your financial situation or investment objectives.

Our equity methodology seeks to diversify across different market segments (e.g., domestic and international; large-, mid-, and small-capitalization; and growth and value). While investing in equity securities can help grow your wealth over the long term, stock markets are volatile and you may lose money in a sharp downturn that can occur without warning. The Service will generally diversify the domestic stock Portfolio across market capitalization segments in similar proportion to their long-term market weight. In addition, the Service seeks to balance growth and value investment styles in Portfolio construction. The Service examines the industry segments represented in the Portfolio to ensure the Portfolio isn't too heavily concentrated in one or more industry sectors, countries, or market segments. See the "Investment risks" section of this brochure for discussions of product risks.

Our bond methodology emphasizes broad diversification across the bond market and maintains an interest rate risk exposure in line with the broad bond market. Investments in bonds are subject to multiple risks, including interest rate, credit, and inflation risk. Diversification across market segments, issuers, and the yield curve helps mitigate these risks. The Service generally seeks to build Portfolios that are diversified across short-, intermediate-, and long-maturity bond funds and seeks to maintain an intermediate-term duration. An intermediate-term duration generally means that your Portfolio stays in the middle of the spectrum when measuring its sensitivity to interest rate changes while maintaining exposure to all areas of the maturity range. The Service also recommends a broad exposure to investment-grade bond funds (both corporate and Treasury bonds). The Service will seek to build a high-credit-quality Portfolio of bond funds, including funds that hold corporate, Treasury, agency, and mortgage-backed bonds. Depending on your tax bracket, we may recommend tax-exempt bond funds for your taxable account(s). Bond portfolios may incorporate a mix of domestic and foreign bond funds. As with equities, the Service examines bond sector exposure to ensure the Portfolio isn't concentrated in a single segment, which could expose the Portfolio to a higher level of risk. See the "Investment risks" section of this brochure for discussions of product risks.

Diverse investments, primarily consisting of low-cost Vanguard Funds and ETFs After determining the overall asset mix and your stock and bond sub-allocations, the Service will then recommend appropriate investments for your Portfolio. The Service typically recommends Vanguard Funds based on their low cost and diversification. The Service may recommend active or index Vanguard Funds to achieve the recommended exposures. Generally, the Service approaches fund selection with a long-term, buy-and-hold approach, and discourages switching strategies based solely on recent performance. However, VAI may recommend reallocating holdings among different Vanguard Funds as we periodically reassess the most appropriate investments to achieve the targeted asset allocation and sub-allocations. In determining which investments are appropriate for your goal, Vanguard may consider factors such as your risk tolerance, your investment time horizon, your Portfolio balance, investment and tax costs, the availability of tax-advantaged accounts, and your tax status. Specific information related to past performance and historical rates of return for investments included in a client's Financial Plan is available in each fund's prospectus.

If you wish to transfer securities into the Portfolio, we'll review the securities to be transferred to determine whether these securities should be held in the Portfolio or sold immediately, and we'll outline that recommendation in your Financial Plan. We may weigh the tax costs of selling your current investments in determining how to transition you to the recommended Portfolio. We may retain certain investments at your direction, such that the resulting investments would represent an appropriately diversified Portfolio as per Vanguard's portfolio construction methodology. VAI won't be responsible for performing due diligence or ongoing analysis to determine the merits of non-Vanguard funds and securities that are subject to a client-directed hold.

For purposes of our recommendations, we use the average cost method of estimating cost basis for all investments. If no cost basis is provided for a security, we'll assume that your entire position is held at a gain. At the time of an actual transaction, your capital gains or losses may differ from our estimates. While the Service may weigh the tax impact of potential Portfolio changes, transitioning the Portfolio based on our portfolio construction guidelines could result in realized taxable gains or losses, or the generation of taxable dividend income or tax-preference items that are taxable under the alternative minimum tax. Neither VAI nor any affiliated entity shall have any responsibility to pay these taxes. Further, the Service doesn't provide tax advice, and any tax information provided isn't a substitute for the advice of a qualified tax advisor. You should consult with your tax advisor to discuss tax-related concerns.

Considering tax efficiency in allocating assets across multiple Portfolio accounts For Portfolios containing both taxable and tax-deferred accounts, the Service will aim to optimize the tax efficiency of the Portfolio by purchasing less tax-efficient securities in the tax-advantaged accounts. We'll generally look to purchase bond funds in tax-advantaged accounts and index equity funds in taxable accounts. The Service generally limits your exposure to active equity funds based on the capacity in your tax-advantaged accounts that remains after you meet the targeted bond allocation in those accounts. However, we may modify our approach to tax-efficient investing based on continuing portfolio construction research performed by the Vanguard Investment Strategy Group or changes in tax laws.

## Adjusting the Portfolio asset allocation

Each quarter (with timing determined by your contract anniversary date), the Service will review your target allocation as illustrated in the asset allocation schedule found in your Financial Plan in relation to your investment time horizon to determine if the asset allocation you approved as part of your Financial Plan requires a change in your target allocation. The Portfolio's recommended target allocation may require changes based on changes to your financial situation and investment objectives. If so, changes in your asset allocation may cause the Service to recommend or cause the purchase or sale of securities in the Portfolio in order to meet the new target asset allocation and reflect your progress along the asset allocation schedule.

In some cases, factors such as your ability to bear risk, your investment time horizon, your financial situation, or your overall investment objectives may change. If that occurs, you should notify your advisor, and the Service may recommend adjusting your asset allocation to reflect those changes. The Service won't change the recommended asset allocation based on market conditions. If the Service recommends a different asset allocation, you'll receive a new Financial Plan for your review and approval.

## Client may specify reasonable restrictions

You'll be able to impose reasonable restrictions on the Portfolio as discussed in the "Advisory business" section of this brochure. Any restriction you wish to impose is subject to review and approval by Vanguard Personal Advisor Services. Restrictions will be allowed as long as they aren't inconsistent with the Vanguard Personal Advisor Services methodology. The Portfolio will remain diversified by asset class and within each asset class to ensure that no single security or class of securities will impose an unreasonable level of risk.

#### Securities recommendations and risk

VAI generally recommends investments in Vanguard Funds. Although VAI will recommend investment strategies designed to be prudent and diversified, please remember that all investments, including mutual funds and investment company securities, involve some risk, including possible loss of principal. Be aware that fluctuations in the financial markets and other factors may cause declines in the value of your account(s). There's no guarantee that any particular asset allocation or mix of funds will meet your investment objectives or provide you with a given level of income. The Service generally makes investment recommendations using historical information. There's no quarantee that an investment strategy based upon historical information will meet your investment objectives, provide you with a given level of income, or protect against loss, particularly when future market conditions are drastically different from the information used to create your strategy. Diversification doesn't ensure a profit or protect against a loss in a declining market. There's no assurance that you'll achieve positive investment results by using VAI. VAI can't guarantee the future performance of your investments. Please consult a fund's prospectus for more information about fund-specific risks. You should carefully consider all of your options before acting upon any advice you receive.

## Goals forecasting

In addition to creating and implementing a Financial Plan for the Portfolio, the Service will also provide projections to help you assess your ability to achieve your personalized financial goal(s).

#### Setting an asset allocation for your goals

As detailed in the "Developing an asset allocation for the Portfolio" section, the Service will utilize the financial objectives information gathered from you in connection with establishing the investment strategy for your Portfolio in order to set an appropriate asset allocation for the accounts supporting your goals. It's important to recognize that any non-Portfolio accounts included in the projections for a particular goal are assumed to be invested in the same allocations as any Portfolio assets for that goal. Although the Service will also offer goals forecasting for goals that are entirely supported by non-Portfolio accounts, the Service will make an assumption about the asset allocation to be used for such goal that is based on the information gathered from you in connection with establishing the investment strategy for your Portfolio. If your non-Portfolio accounts are not invested in a similar manner as your target asset allocation for your Portfolio, your actual investment results may vary significantly from what we're projecting. A variance in the actual asset allocation could significantly impact your likelihood of reaching a goal within the indicated time frame.

Non-Portfolio accounts and cost assumptions used in goals forecasting Any goals that are forecasted using non-Portfolio accounts (including other Vanguard accounts) are calculated based solely on the information that you provide with respect to the dollar amount of assets held in those accounts, and your rate of contributions to those accounts. The Service will continue to rely upon the information provided by you for so long as your goals are supported by such accounts, and VAI may not independently verify this information.

Finally, the actual costs of investments held in the Portfolio and any non-Portfolio accounts are not factored into the projections. Instead, the Service assumes an annual 50-basis-point (0.50%) expense for all accounts supporting a particular goal.

#### Benchmarks used in the calculations

The returns used in the simulations for each type of goal are based on data for the appropriate market indexes.

#### Retirement goal forecasting for near-retirees and retirees

One of the biggest challenges investors nearing or in retirement face is ensuring that savings and income will cover future expenses throughout what could be an extended lifetime. We seek to reduce the uncertainties surrounding this key financial concern. We project your lifetime cash flows—inflows from investment income and other sources and outflows from spending—to assess whether your investments are properly positioned to last throughout your retirement.

We evaluate many factors in assessing your current and future cash flows, including:

- Projected and known expenses, including basic living expenses, fixed periodic expenses (such as a mortgage), retirement plan contributions (if applicable), major purchases, charitable gifts, and taxes on income and investments.
- Income from employment, investments, pensions, Social Security, retirement plans, and noninvestment sources.
- The impact of variables, such as inflation and taxes.
- The impact of different market scenarios on the Portfolio's rate of return and savings.

It's important that the accounts supporting this goal be able to endure a variety of market conditions. To help you cover your expenses throughout retirement and through all market conditions, our cash-flow analysis shows how your assets would perform under various hypothetical scenarios based on actual historical returns.

When we stress-test your accounts supporting this goal, based on your current retirement assets and projected cash flows, rather than relying on historical long-term market averages, we create hypothetical scenarios by using the actual past-performance patterns of broad-market benchmarks. We believe this method is more useful because it allows

us to see how your investments would perform even if the markets experience extended downturns, as they did at times during the past nine decades.

Our analysis incorporates the beneficial and adverse conditions that have occurred in recent history. We use the period from 1926 through the most recent year-end for past-performance and inflation data because it encompasses a variety of different economic and investment environments. When we stress-test your accounts supporting this goal using historical conditions, we create more than 80 different hypothetical scenarios, or "time paths." First, we analyze your income needs in retirement. Then we run simulations through all the time paths and assume you began taking withdrawals at a specific point in history (for example, 1960, 1970, or 1980). We then use the actual historical rates of return that occurred in each subsequent year from that point forward, applying them in sequence to your assets supporting this goal as time moves forward. If a path goes beyond the most recent year-end, we loop back to the returns of 1926 and cycle forward from there until either your assets are depleted or the end of your planning horizon is reached. Your estimated success rate is simply the fraction of these paths in which your balance is above zero at the end of your planning horizon.

## Asset allocation and return assumptions

The Service's goal forecasting model uses index returns to represent asset classes. Index returns are reduced by 0.50% annually to account for hypothetical investment expenses and advisory fees. Investment returns and inflation are modeled based on historical data from 1926 through the most recent year-end.

#### Limitations of the quantitative analysis

The goal forecasts are hypothetical projections based on historical data and aren't a guarantee that your retirement income will sustain you throughout your retirement nor are they a guarantee of the success rate of the simulated outcomes.

### Goals forecasting for accumulator goals

An accumulator goal is one in which you're currently saving for a future event. Accumulator goals can focus upon saving a sum for a single lump distribution (such as saving for a home) or upon saving a sum to be drawn down over an extended period of time (such as saving for retirement). We'll illustrate the process using an accumulator goal with an extended drawdown.

The projections use a Monte Carlo analysis to simulate future market scenarios. To cover a broad range of outcomes, the Service will generate 10,000 simulations for each goal. The goal forecasts are hypothetical projections based on historical data and aren't a guarantee of future results or a guarantee of the success rate of the simulated outcomes. Goals forecasting uses forecasted returns for equities, bonds, and cash in the Monte Carlo simulations to determine the projection for each goal. These forecasted returns are provided through the Vanguard Capital Markets Model® ("VCMM"), developed by the Vanguard Investment Counseling & Research and Investment Strategy Groups, which is discussed in more detail later. Although VAI believes that the forecasts may reasonably project goals that are supported by accounts invested in a diversified portfolio of Vanguard Funds, such projections may not correlate well to other assets held by you in non-Portfolio accounts. Accordingly, your actual investment results may vary significantly from our projections.

The first step involves estimating the amount of assets that you'll need to accumulate at the beginning of the spending phase. To do so, you'll need to inform us of the annual amount that you expect to spend, the year in which you expect spending to begin, the number of years during which you expect to spend, and any sources of income you may have during the spending phase. After adjusting for inflation, the Service will arrive at the estimated sum needed at the beginning of the spending phase by running the VCMM Monte Carlo simulations using the underlying asset allocation assumption for the goal. The calculations will be performed with the aim of estimating a sum that will allow you to meet your spending needs in 85% of the Monte Carlo simulations (meaning that we estimate that, in 85% of the scenarios projected, you'll have at least \$1 left at the end of the spending phase).

The second step involves determining whether you're on track in the accumulation phase to meet your overall goal of arriving at the sum needed at the outset of the drawdown phase. In order to model the accumulation phase, you must provide the Service with the current amount of assets you have in support of the goal and the amount that you intend to save annually until the start of the drawdown phase. Using the underlying asset allocation for the goal, the Service will run the VCMM Monte Carlo simulations and calculate what percentage of scenarios had an ending balance greater than or equal to your target amount at the outset of the spending phase. The ability to meet a goal will be quantified using a success rate. A successful outcome is defined as one in which the projected ending account balance either meets or exceeds the target balance by the target goal year. For example, if a goal has a success rate of 80%, then 80% of the simulations resulted in a projected ending balance that met or exceeded the target goal amount.

#### Vanguard Capital Markets Model

The Vanguard Capital Markets Model ("VCMM") is a proprietary, state-of-the-art, financial simulation tool developed and maintained by the Vanguard Investment Counseling &

Research and Investment Strategy Groups. The VCMM uses a statistical analysis of historical data for interest rates, inflation, and other risk factors for global equities, fixed income, and commodity markets to generate forward-looking distributions of expected long-term returns. The asset return distributions used in the goals forecasting models are drawn from 10,000 VCMM simulations based on market data from 1926 for the equity markets and from 1960 for the fixed income markets through the most recent year-end. The Service may revise the market data used in the tool during the year in the event of a major market event.

The VCMM is grounded on the empirical view that the returns of various asset classes reflect the compensation investors receive for bearing different types of systematic risk, a measure of the volatility of a security or a portfolio relative to a benchmark, also known as beta. Using a long span of historical monthly data, the VCMM estimates a dynamic statistical relationship among global risk factors and asset returns. Based on these calculations, the model uses regression-based Monte Carlo simulation methods to project relationships in the future. A regression-based Monte Carlo framework incorporates the uncertainty of any asset class that's produced by basic Monte Carlo simulation and also captures the dynamic relationships among certain assets and risk factors. By incorporating a variety of macroeconomic and financial risk factors into the return-generating process, a regression-based Monte Carlo framework generates financial simulations that are responsive to changes in the economy. By explicitly accounting for important initial market conditions when generating its return distributions, the VCMM framework departs fundamentally from more basic Monte Carlo simulation techniques.

#### Asset allocation and return assumptions

The Service's goal forecasting model uses index returns to represent asset classes. Index returns are reduced by 0.50% annually to account for hypothetical expenses and advisory fees. Inflation is modeled based on historical data from 1960 through the most recent yearend and simulated going forward.

#### Limitations of the quantitative analysis

Projections generated by the VCMM are based both on estimated historical relationships and on assumptions about the risk characteristics of various asset classes. As a result, the accuracy of VCMM forecasts depends on the relevance of the historical sample in simulating future events. The projections are hypothetical in nature, don't reflect actual investment results, and aren't guarantees of future results.

#### Disciplinary information

VAI has no material legal or disciplinary information to disclose.

## Other financial industry activities and affiliations

### The Vanguard Group, Inc.

VAI is 100% owned by Goliath, Inc., a Delaware corporation, which is wholly owned by The Vanguard Group, Inc. ("Vanguard"). Vanguard, also a registered investment advisor, provides a range of investment advisory and administrative services to the Vanguard family of mutual funds ("Vanguard Funds"). Vanguard is truly a *mutual* mutual fund company. It's owned jointly by the funds it services and thus indirectly by the shareholders in those funds. Most other mutual funds are operated by management companies that may be owned by one person, by a private group of individuals, or by public investors who own the management company's stock. The management fees these companies charge include a profit component over and above the companies' costs of providing these services. By contrast, Vanguard provides services to its member funds on an at-cost basis, with no profit component, which helps to keep the funds' expenses low.

When giving advice to clients, VAI will recommend the purchase of Vanguard Funds serviced by VAI's corporate parent, Vanguard. VAI addresses the competing interests that could arise between us and our clients as a result of recommending proprietary funds by relying on our time-tested investment philosophies and beliefs, such as the benefits of low costs, diversification, and indexing, when formulating target allocations for clients. VAI discloses to prospective clients that it recommends Vanguard Funds prior to, or at the establishment of, the advisory relationship. Although acting in accordance with VAI's advice to purchase Vanguard's proprietary funds will result in the payment of fees to the Vanguard Funds and ETFs that are separate from, and in addition to, any fees assessed by VAI, any competing interests that could arise are mitigated by the at-cost nature of Vanguard's services to the funds.

## Vanguard Marketing Corporation

Shares of the Vanguard Funds are marketed and distributed by Vanguard Marketing Corporation ("VMC"). VMC's marketing and distribution services are conducted on an atcost basis in accordance with the terms and conditions of a 1981 exemptive order from the SEC, which permits Vanguard Funds to internalize and jointly finance such activities. Each Vanguard Fund (other than a fund of funds) or each share class of a fund (in the case of a fund with multiple share classes) pays its allocated share of VMC's marketing costs. VMC doesn't receive transaction-based compensation in connection with the distribution of the Vanguard Funds.

When giving advice to clients, VAI will recommend the purchase of Vanguard Funds distributed by VAI's affiliate, VMC. Since VMC performs its marketing and distribution services on an at-cost basis and doesn't receive transaction-based compensation in connection with the distribution of the Vanguard Funds, no competing interests arise from VAI's affiliation with VMC in its role as distributor of the funds and ETFs. However, to the

extent that you maintain a brokerage account with VMC as part of the Portfolio, VMC may receive compensation from you that's separate from, and in addition to, the fees payable under the Service. Please see the section of this brochure entitled "Brokerage practices" for more information about brokerage charges.

Certain members of VAI's management responsible for the Service are registered representatives of, or are affiliated with, VMC. Please refer to the *Supplement to the Ask a CFP Professional, Vanguard Financial Plan, and Vanguard Personal Advisor Services Brochures* for further information.

## Vanguard Fiduciary Trust Company

VAI is also affiliated with Vanguard Fiduciary Trust Company ("VFTC"), a limited-purpose trust company incorporated under the banking laws of the Commonwealth of Pennsylvania and a wholly owned subsidiary of Vanguard. VFTC serves as custodian for traditional IRA, SEP-IRA, and Roth IRA accounts (collectively referred to as "Vanguard IRAs"). Vanguard will perform administrative services in connection with Vanguard IRAs, for which Vanguard may be reimbursed, at cost by VFTC. VFTC may charge reasonable custodial fees with respect to the establishment and maintenance of your Vanguard IRAs at any time during the calendar year. You should consult the Disclosure Statement and Custodial Account Agreement governing your Vanguard IRAs for more information relating to VFTC's fees and services provided.

#### Code of ethics, participation or interest in client transactions, and personal trading

VAI operates under a code of ethics that complies with Rule 17j-1 of the Investment Company Act of 1940 and Rule 204A-1 of the Investment Advisers Act of 1940.

The code sets forth fiduciary standards that apply to all employees, incorporates Vanguard's insider trading policy, and governs outside employment and receipt of gifts. Additionally, the code imposes restrictions on the personal securities trading of Vanguard employees, as well as reporting requirements. The trading restrictions and reporting requirements are more involved for employees that have access to information about Vanguard Fund trading activity or Vanguard client trading activity and are designed to ensure that Vanguard employees don't misuse fund or client information for their own benefit.

Vanguard will provide a copy of its code of ethics to any client or prospective client upon request at no charge.

Please see the previous section of this brochure entitled "Other financial industry activities and affiliations" for a discussion of VAI's affiliations with other Vanguard entities and how those affiliations may impact clients of VAI.

## **Brokerage practices**

VAI doesn't usually recommend broker-dealers in connection with client transactions arising out of VAI's advice, as VAI generally recommends the purchase of Vanguard Funds. However, if you transact in Vanguard ETFs or non-Vanguard securities in the Portfolio, you'll be required to establish or utilize an existing brokerage account held through Vanguard Marketing Corporation ("VMC") for those securities, and you'll agree in your account application to execute all Portfolio brokerage transactions through VMC. Transactions executed in a VMC brokerage account will be subject to VMC's usual and customary fees, markups, commissions, and charges, separate and apart from the advisory fees assessed by VAI in connection with the Service.

Periodically, VAI conducts due diligence to review the execution quality of any transaction services provided by VMC for clients' Portfolios, primarily to oversee VMC's compliance with its best execution practices. VMC routes equity and option orders to various markets. VMC uses a top-down approach in selecting market participants with which VMC will establish a relationship. This approach includes a review of system availability and quality of service, as well as financial and regulatory standing. The designated market participants to which orders are routed are selected based on the consistent high quality of their executions in one or more market segments. In analyzing quality of executions, VMC considers factors such as liquidity enhancement, price improvement, execution speed, and overall effective price compared with the national best bid or offer ("NBBO"). VMC regularly conducts analysis and reviews reports for quality of execution purposes.

#### Mutual fund transactions

Mutual fund trades in a VMC brokerage account are limited to those fund families with which VMC has entered into a selling agreement. VMC receives transaction fees, front- and back-end loads, sales charges, and 12b-1 fees in connection with certain transactions in third-party mutual funds through VMC's FundAccess® program. VMC may also receive fees for the provisioning of various shareholder services in connection with the participation of certain mutual funds in the FundAccess program. These fees may be considered revenue sharing and represent a significant source of revenue for VMC. Determined in accordance with an asset-based formula, these payments may equal up to 0.40% of a mutual fund's assets under management at VMC on an annual basis. VMC may also receive operational payments from mutual funds in the form of networking or per-position fees of up to \$20 for each customer position in a mutual fund on an annual basis. These fees are reimbursed to VMC for the work it performs on behalf of the funds, which may include, but isn't limited to, subaccounting services, dividend calculation and posting, accounting, reconciliation, client confirmation and statement preparation and mailing, and tax statement preparation and mailing. Certain funds offered through the FundAccess program assess purchase and redemption fees. In the event that the Portfolio transacts in a fund that assesses such fees

or pays the aforementioned forms of compensation to VMC, those fees will be imposed on your transaction(s) and the compensation will be paid to VMC separate and apart from the advisory fees assessed by VAI in connection with the Service.

#### Exchange-listed options

VMC routes orders in exchange-listed options to one or more market participants with the objective of obtaining best execution. VMC receives compensation for directing options order flow to specific market participants with which it has a relationship (Citadel Execution Services, Citigroup Global Markets, UBS Securities LLC, and Knight Capital Americas). VMC receives payments at an average blended rate below \$0.18 per contract. VMC doesn't receive payment for options orders routed to Pershing LLC. In the event that you transact options in your Portfolio, VMC may receive payment for order flow separate and apart from the advisory fees assessed by VAI in connection with the Service.

Other investment advisors may not require you to direct brokerage transactions through a specified broker-dealer. By directing brokerage transactions to VMC, VAI may be unable to achieve most favorable execution of clients' transactions, and this practice may cost clients more money. The advice provided by the advisor, however, won't take into consideration whether Vanguard or any of its affiliates would receive fees from its recommendation to purchase, hold, or sell non-Vanguard investments.

If you're interested in receiving other brokerage services, VAI may inform you of the availability of such services through VMC but won't make recommendations of broker-dealers.

### Review of accounts

Vanguard Personal Advisor Services will periodically evaluate and monitor the Portfolio through investment reviews and analyses. Each quarter, with timing determined by your contract anniversary date, we'll check your Portfolio to make sure it's in line with your target allocation.

#### Adjusting the asset allocation

The Service may recommend adjusting your asset allocation as your ability to bear risk changes or to account for changes to your investment time horizon, but it won't change the asset allocation based on market conditions. Quarterly, the Service will review your target allocation in relation to your investment time horizon to determine if changes to the allocation are necessary. The Portfolio's target allocation may also change based on changes to your financial situation and investment objectives. Changes in your asset allocation may cause the Service to recommend or cause the purchase or sale of securities in your Portfolio in order to meet the new target asset allocation.

#### Rebalancing the Portfolio

If during a quarterly review your Portfolio is found to deviate from the target asset allocation by more than 5% in any asset class, Vanguard Personal Advisor Services will rebalance your Portfolio. The overweighted sub-asset classes will be sold and the proceeds invested in underweighted sub-asset classes in accordance with your Financial Plan. The Service will attempt to minimize the tax costs associated with rebalancing your Portfolio. If the Portfolio consists of both taxable and tax-advantaged registrations, we'll attempt to rebalance within the tax-advantaged accounts to limit tax costs as well as consider the tax implications of repositioning investments within the taxable accounts. In an attempt to maintain your target allocation through a tax-efficient rebalancing strategy, the Service may propose adding new investments to or removing investments from the Portfolio. Additionally, the Service will use cash flows as an opportunity to adjust your holdings to your target allocation. That is, the Service will invest your contributions or liquidate your withdrawals in a manner that adjusts your overall allocation back to your target allocation, in order to minimize transaction and tax costs.

As noted earlier, at least annually an advisor will contact you to validate your financial planning needs and the strategy chosen for the Portfolio, and to determine whether to propose any changes to your Financial Plan. Material changes to your financial situation, investment objectives, or reasonable restrictions may impact your goals or your Financial Plan. If you fail to respond to our attempts to schedule and conduct an annual review, we'll assume that there have been no changes to your financial situation, risk tolerance, tax situation, other assets or sources of income, investment time horizon, investment objectives, planned spending from the Portfolio, or desired reasonable restrictions, and we'll continue implementing your approved Financial Plan.

If there have been any changes to your financial situation, other assets or sources of income, investment time horizon, investment objectives, planned spending from the Portfolio, or desired reasonable restrictions since your last review with an advisor, it's important that you communicate those changes to VAI. Any updates will be evaluated by VAI as soon as reasonably practicable to determine whether the Service should propose any updates or changes to your Financial Plan or Portfolio for your review and approval.

As owners of Vanguard Funds, VAI clients will receive or have access to communications with respect to those securities. These communications include transaction confirmations, quarterly account statements, prospectus updates, annual and semiannual reports, and proxy statements relating to their holdings (as appropriate), as well as general Vanguard newsletters, e-mails, and other communications.

## Client referrals and other compensation

VAI doesn't receive compensation or other economic benefits from persons other than clients for providing investment advice or advisory services to its clients. VAI doesn't directly or indirectly compensate any person who isn't a supervised person for client referrals.

### Custody

The Vanguard Group, Inc. ("Vanguard"), the transfer agent of the Vanguard Funds, acts in the capacity of a qualified custodian for those Funds and sends quarterly or more frequent account statements directly to you. Vanguard will also transmit transaction confirmations to you in connection with purchases and sales made in your Vanguard mutual fund account(s).

Vanguard Marketing Corporation ("VMC"), a registered broker-dealer, serves as qualified custodian in relation to any Vanguard ETFs, individual securities, third-party mutual funds, or other non-Vanguard securities that clients may invest in. As such, VMC sends out quarterly or more frequent account statements directly to you. VMC will also transmit transaction confirmations to you in connection with purchases and sales made in your Vanguard Brokerage account (provided that VMC may furnish periodic statements of account activity in lieu of transaction confirmations in compliance with Rule 10b-10 of the Securities Exchange Act of 1934).

You should carefully review and compare all account statements and reports from Vanguard and VMC with any account information made available by VAI, and contact the appropriate entity with any questions.

#### Investment discretion

In connection with this Service, you must approve your Financial Plan and direct VAI to implement the recommended investment strategy for your Portfolio either verbally or in writing (including e-mail and similar electronic communications). VAI will construct and invest your Portfolio in accordance with your approved Financial Plan, including any reasonable restrictions that you may wish to impose on VAI's investment of the Portfolio. Changes to the investment strategy set forth in the Financial Plan will be made only with your consent. Until you approve the Financial Plan and direct that it be implemented, VAI will take no action with respect to the assets held in the Portfolio. Within five business days after you approve the Financial Plan, VAI will initiate steps to begin implementing your investment strategy as specified in the Financial Plan, unless you direct VAI to implement the Financial Plan over time.

In implementing the Financial Plan, VAI or its affiliates will have the authority, on your behalf, to purchase, sell, exchange, or transfer assets; rebalance and reallocate assets; and execute other necessary and appropriate transactions, including transmitting oral, written, or online instructions to effect transactions with third parties, at the times and according to the terms established in the Financial Plan. VAI may change the investments used to effect the investment strategy set forth in the Financial Plan at any time and without prior notice to you, including changing the investments used for purposes of rebalancing the Portfolio or substituting a particular investment for another investment you previously approved. If, however, VAI recommends such a change with respect to securities held in an IRA, VAI will notify you at least 30 days before the change is implemented. Any notice of a proposed change in investments will include the effective date of the proposed change, instructions you may follow to avoid the proposed change, and a reminder that your failure to respond by a specified date will be deemed to be your consent to the proposed change in investments. Your Financial Plan may also contain a standing instruction to reassess your asset allocation or rebalance the Portfolio on a predetermined basis if and to the extent set forth in the Financial Plan.

In your agreement with VAI, you'll grant us the authority to open new accounts with our affiliates for you with identical registrations in order to transfer and segregate securities in the Portfolio. This authority will be exercised by VAI to fulfill your stated needs for the Portfolio or your goals-based reporting, such as when you only want to enroll a portion of your funds or securities in the Service, or in the event that we need to segregate your investments to support various goals selected by you.

#### Voting client securities

VAI won't vote or exercise similar rights for your securities. The exercise of all voting rights associated with any security or other property held by you shall be your responsibility. VAI won't advise or act for you in any legal proceedings, including bankruptcies or class actions, involving securities held or previously held by you or the issuers of those securities. Proxies will be delivered directly by the issuer of the security, the custodian, or its agent.

#### Financial information

VAI isn't aware of any financial condition that's reasonably likely to impair its ability to meet contractual commitments to you.

#### Requirements for state-registered advisors

VAI is a federally registered investment advisor.

#### Investment risks

## Equity-specific risks:

**Stock market risk** is the chance that stock prices overall will decline. Stock markets tend to move in cycles, with periods of rising prices and periods of falling prices.

**Nondiversification risk** is the chance that a fund's performance may be hurt disproportionately by the poor performance of relatively few securities. A fund is considered nondiversified if it may invest a greater percentage of its assets in the securities of particular issuers as compared with other mutual funds.

**Industry concentration risk** is the chance that there will be overall problems affecting a particular industry.

Manager risk is the chance that poor security selection or focus on securities in a particular sector, category, or group of companies will cause a fund to underperform relevant benchmarks or other funds with a similar investment objective.

Sector risk is the chance that significant problems will affect a particular sector or that returns from that sector will trail returns from the overall stock market. Daily fluctuations in specific market sectors are often more extreme than fluctuations in the overall market. Because a fund invests all, or substantially all, of its assets in a particular sector, the fund's performance largely depends—for better or for worse—on the general condition of that sector.

Funds of funds are also subject to manager risk, which is the chance that poor security selection or focus on securities in a particular sector, category, or group of companies will cause one or more of the fund's underlying funds—and, thus, the fund itself—to underperform relevant benchmarks or other funds with a similar investment objective.

Index sampling risk is the chance that the securities selected for a fund, in the aggregate, won't provide investment performance matching that of the fund's target index.

**Investment style risk** is the chance that:

- Returns from large-capitalization stocks will trail returns from the overall stock market. Large-cap stocks tend to go through cycles of doing better—or worse—than other segments of the stock market or the stock market in general.
- Returns from small- and mid-capitalization stocks will trail returns from the overall stock
  market. Historically, small- and mid-cap stocks have been more volatile in price than
  the large-cap stocks that dominate the overall market, and they often perform quite
  differently.

International risk or country/regional risk is the chance that world events—such as political upheaval, financial troubles, or natural disasters—will adversely affect the value of securities issued by companies in foreign countries or regions. Because a fund may invest a large portion of its assets in securities of companies located in any one country or region, including emerging markets, its performance may be hurt disproportionately by the poor performance of its investments in that area. Country/regional risk is especially high in emerging markets.

Emerging markets risk is the chance that the stocks of companies located in emerging markets will be substantially more volatile, and substantially less liquid, than the stocks of companies located in more developed foreign markets.

**Currency risk** is the chance that the value of a foreign investment, measured in U.S. dollars, will decrease because of unfavorable changes in currency exchange rates. Currency risk is especially high in emerging markets.

#### Bond-specific risks:

Call risk is the chance that during periods of falling interest rates, issuers of callable bonds may call (redeem) securities with higher coupons or interest rates before their maturity dates. The fund would then lose any potential price appreciation above the bond's call price and would be forced to reinvest the unanticipated proceeds at lower interest rates, resulting in a decline in the fund's income. Call risk is generally low for short-term bond funds, moderate for intermediate-term bond funds, high for long-term bond funds, and high for high-yield bond funds.

Prepayment risk is the chance that during periods of falling interest rates, homeowners will refinance their mortgages before their maturity dates, resulting in prepayment of mortgage-backed securities held by the fund. The fund would then lose any price appreciation above the mortgage's principal and would be forced to reinvest the unanticipated proceeds at lower interest rates, resulting in a decline in the fund's income.

Manager risk is the chance that poor security selection will cause a fund to underperform relevant benchmarks or other funds with a similar investment objective.

Credit risk is the chance that the issuer of a convertible security will fail to pay interest or dividends and principal in a timely manner or that negative perceptions of the issuer's ability to make such payments will cause the price of that security to decline.

**Income risk** is the chance that the fund's income will decline because of falling interest rates. Income risk is generally high for short-term bond funds, low for long-term bond funds, and high for limited-term bond funds.

Interest rate risk is the chance that bond and loan prices overall will decline because of rising interest rates.

State-specific risk is the chance that developments in specific states will adversely affect the securities held by the fund. Because the fund invests primarily in securities issued by the state and its municipalities, it's more vulnerable to unfavorable developments in the state than are funds that invest in municipal securities of many states. Unfavorable developments in any economic sector may have far-reaching ramifications on the overall state municipal market.

Liquidity risk is the chance that the fund may not be able to sell a security in a timely manner at a desired price. Liquidity risk is generally low for short-term bond funds, moderate for intermediate-term bond funds, and high for long-term bond funds.

Currency hedging risk is the risk that the currency hedging transactions entered into by a fund may not perfectly offset the fund's foreign currency exposure.



## Vanguard Advice Services

P.O. Box 709 Valley Forge, PA 19482-0709

Connect with Vanguard® > vanguard.com > 800-416-8420

Advice services are provided by Vanguard Advisers, Inc., a registered investment advisor.